

ABSTRACT OF THE DISCLOSURE

A wavelength-division multiplexed optical transmission system to keep the correlation of data patterns among wavelength channels to the low level, preventing large XPM and XGM from occurring when the correlation is strong, and assuring a stable transmitting quality. The wavelength-division multiplexed optical transmission system for transmitting an optical signal constructed by a frame has any of (1) a frame phase changing circuit for mutually differing transmitting frame phases between at least two or more wavelength channels among a wavelength channel group transmitted through the same optical fiber transmitting line system, or (2) a scrambling circuit using a data scrambler based on a pseudo random pattern for mutually differing scrambling patterns between two or more wavelength channels among a wavelength channel group transmitted through the same optical fiber transmitting line, or (3) a dummy data generating circuit for mutually differing invalid data patterns between at least two or more wavelength channels in a wavelength channel group transmitted through the same optical fiber transmitting line when transmitting meaningless data.

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